

7 TRAFFIC

This chapter includes a discussion of the existing transportation and circulation setting in the vicinity of the Patterson mine site and an analysis of potential traffic impacts associated with the proposed mine expansion project. Traffic data from the Riosa Road/SR 65 intersection are provided in Appendix C of this EIR.

7.1 EXISTING CONDITIONS

STUDY AREA ROADWAYS

The study area for this traffic impact analysis is shown in Exhibit 7-1. The study focuses on the truck route that serves the project. The current route for outbound haul trucks follows Camp Far West Road south to Porter Road, Porter and Karchner Roads south to Riosa Road, and Riosa Road through Sheridan to SR 65. Trucks then travel either northbound or southbound on SR 65 to their destinations. Returning haul trucks and delivery vehicles travel the reverse direction of the outbound haul route on the same roads. The key roadways in the project vicinity, including those used for the existing haul route, are described below.

SR 65 is a north south state highway that connects Interstate 80 (I-80) in Roseville to SR 70 south of Marysville. This highway contains two lanes through the Sheridan area. SR 65 links the Sheridan area and the project vicinity to the remainder of the Sacramento metropolitan area. It carries an average of about 15,000 vehicles per day (both light and heavy duty) north of Sheridan, 14,200 vehicles south of Sheridan, and 18,700 vehicles through downtown Lincoln.

Riosa Road is designated as a rural collector roadway in the Placer County General Plan. This two-lane roadway is Sheridan's primary access to SR 65. It also links the project vicinity to SR 65. Riosa Road carries about 3,000 vehicles per day east of SR 65.

Karchner Road is a local roadway that connects Riosa Road to McCourtney Road, east of Sheridan. West of Porter Road, this roadway is part of the truck route that connects the project site to SR 65.

Porter Road is a local roadway that connects Karchner Road to Camp Far West Road. This roadway is part of the truck route from the project site to SR 65.

Camp Far West Road is a local roadway that links central Sheridan to the Camp Far West Reservoir area. Between Sheridan and Porter Road, Camp Far West Road is a lightly traveled roadway. The section of Camp Far West Road between Porter Road and the project site is part of the truck route that connects the project site to SR 65. Between Porter Road and the entrance to the project site, it carries about 900 vehicles per day. East of the project site, it carries about 200 vehicles per day.

Existing average daily traffic volumes on study area roadways are displayed in Exhibit 7-2. Existing a.m. and p.m. peak hour volumes at two major study area intersections and two smaller intersections are displayed in Exhibit 7-3.

Exhibit 7-1, page 7-2

Exhibit 7-2

Exhibit 7-3

EXISTING PROJECT TRAFFIC VOLUME

Patterson Sand and Gravel historically kept records on the weight of every truckload leaving the project site and the time that these truckloads left the site. Data on truckloads were provided for each day, by hour of the day, for the period between January 1, 1998, and October 31, 1998. (As a check on these data, a 24-hour traffic count by vehicle type was conducted near the entrance to the project site on October 22, 1998.) During this 10-month period, about 52,800 truckloads exited the project site. The total material hauled by these trucks was 1.24 million tons, for an average of about 23.5 tons per load.

Patterson Sand and Gravel currently keeps records on daily truckloads that leave the site but does not keep records on truckloads per hour. Data on truckloads per day were provided for the period between January 1, 2000, and December 31, 2000. During this 12-month period, 67,074 truckloads exited the project site. The total material hauled by these trucks was approximately 1.5 million tons, for an average of about 23.6 tons per load. This number of truckloads (which involve a round trip, or two one-way truck trips) represents approximately 134,000 one-way truck trips over a 1-year period. Existing truck routes are displayed in Exhibit 7-4.

Exhibit 7-5 is a graph of the daily truckloads, ranked from highest to lowest, during the period of January 1, 2000, to December 31, 2000. The average number of truckloads during this period was about 225 per day; thus the average number of one-way truck trips to the project site was about 450 per day. The highest truck volumes occurred between June and October. During this period the average number of truckloads was 273, representing 546 one-way daily truck trips. The highest daily volume was 563 outbound truckloads, or 1,126 one-way daily truck trips.

7.2 REGULATORY BACKGROUND

A number of Placer and Yuba County standards apply to the evaluation of transportation impacts of the proposed project. These standards cover the primary aspects of the transportation system (operations and design) and should be adhered to by the project. These standards are described below.

PLACER AND YUBA COUNTY LEVEL OF SERVICE (LOS) STANDARDS

Level of service (LOS) is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. The LOS grades are generally defined as follows:

- ▶ LOS A represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.
- ▶ LOS B has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.
- ▶ LOS C has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.

Exhibit 7-4

Exhibit 7-5

- ▶ LOS D represents high-density, but stable flow. Users experience severe restrictions in speed and freedom to maneuver, with poor levels of comfort and convenience.
- ▶ LOS E represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.
- ▶ LOS F is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.

Under the Placer County General Plan, Placer County has set a standard of LOS C or better for its roadway system. Consequently, LOS A, B, and C are considered acceptable, while D, E, and F are generally unacceptable. Within 0.5 mile of a state highway, LOS D will be considered acceptable. While Placer County's LOS policy is based solely on overall intersection delay, delay at minor intersection approaches is supplied in this document for informational purposes.

The Yuba County General Plan states that LOS C shall be maintained on county roads during the p.m. peak hour. On state highways in Yuba County, the LOS goals (LOS E) included in the adopted Yuba Sutter Congestion Management Plan shall be maintained.

OTHER PLACER COUNTY STANDARDS

ROADWAY IMPROVEMENT STANDARDS

Roadway improvements within Placer County must conform to a set of standard plans that detail Placer County standards for pavement width, lighting, drainage, sewer, and other roadside facilities (see Article 12.08, Street Improvements, of the Placer County Code). Roadway facilities associated with the proposed project must meet or exceed these standards.

CAPITAL IMPROVEMENT PROGRAM

The Capital Improvement Program (CIP) was established in Article 15.28, County Road Network, of the Placer County Code pursuant to Implementation Program 3.2 in the Placer County General Plan. This program defines phasing of roadway improvements that are needed to meet Placer County's LOS standards over a 20-year period. This program must be updated a minimum of every 5 years or with the approval of a significant level of development.

BIKEWAY/TRAILS MASTER PLAN

The Placer County General Plan (Policies 3.D.1 through 3.D.4) calls for the development of a comprehensive bikeway system that would provide connections between the major urban areas of the county, with linkages to bikeway systems in other jurisdictions. Placer County developed a Bikeway

Master Plan in 1988 to provide guidelines for the development of a countywide network of bicycle facilities and design standards (based on Caltrans standards) for new bicycle facilities.

7.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

The proposed project would have a significant impact related to traffic if:

- ▶ the project would cause roadway or intersection operations to deteriorate to levels below the applicable standards listed below; or
- ▶ truck traffic from the project would require pavement reconstruction on segments of the Placer County roadway system during the life of the new CUP (projected to extend to approximately 2058).
- ▶ vehicle traffic generated by the project requires pavement reconstruction on segments of Placer County's roadway system during the life of the new conditional use permit. The end of the proposed project (including reclamation) is projected at 2058.

Placer County uses a LOS C standard for county roadways, except for those county roadways within 0.5 mile of a state highway, where LOS D is permissible. The City of Lincoln uses a LOS C standard for local roadways and a LOS D standard for SR 65. Yuba County also uses a LOS C standard in both urban and rural areas.

APPROACH AND METHODOLOGY

The proposed project would extend the period of time that material would be mined and hauled from the project site. The proposed project would also involve the addition of an asphalt batch plant, which would produce some additional employees and truck trips. The effective "life" under both currently permitted operations and the proposed project (and the amount of material hauled per year) would depend on market conditions. Based on recent trends, it was estimated that under the current permit, material would be hauled from the site through about 2028.

During the 12-month period of January–December 2000, the site generated approximately 1.5 million tons of output. As described in Chapter 2, Project Description, the applicant is proposing to mine the estimated 69 million tons of reserves over the next 55 years. Therefore, the AAPR would be 1.25 million tons. Annual production, however, would depend on specific market demand for sand and gravel products. Because 1.25 mty represents the average production rate, the mine would produce more than 1.25 mty of aggregate in some years, and less in others. The Patterson Sand and Gravel mine is subject to a permit to operate (No. 97-57) from the PCAPCD. The permit to operate includes maximum limits for operational air emissions from onsite sources, which limit the mine's annual production rate to 3.2 mty. The EIR refers to this limit as the maximum permitted production rate (MPPR). The MPPR, however, overestimates the maximum amount of aggregate material that the

mine is expected to produce in a year. The mine's highest annual production rate over the past 10 years was 1.82 mty in 1999. This is the highest expected annual production rate, and is called the maximum annual production rate (MAPR) in this EIR. For purposes of this document, the MAPR has been analyzed under "Highest Day" conditions only.

The analysis of traffic impacts involved comparing roadway volumes and LOS generated under the proposed mine expansion project scenario to those generated under the existing conditions of the currently authorized mining operation (the No Project Alternative) under both existing and 2020 conditions.

The traffic impact analysis includes LOS estimates for SR 65/Riosa Road and SR 65/SR 193—key intersections within the communities of Sheridan and Lincoln, respectively—during peak commute hours. Turning movement volumes were counted during both the morning and evening peak commute periods (i.e., 6–9 a.m. and 3–6 p.m.) at these intersections on June 28, 2001. These turning movement counts have been classified into three categories:

- ▶ cars and light trucks,
- ▶ trucks other than gravel trucks, and
- ▶ gravel trucks.

The SR 65/Riosa Road intersection in Sheridan experienced its overall a.m. peak hour from 6 a.m. to 7 a.m. The a.m. peak hour for gravel trucks at this intersection was from 8 a.m. to 9 a.m. The overall p.m. peak hour for this intersection was from 4:30 p.m. to 5:30 p.m., while the peak hour for gravel trucks was from 3 p.m. to 4 p.m. The SR 65/SR 193 intersection in Lincoln experienced its overall a.m. peak hour from 7 a.m. to 8 a.m. The a.m. peak hour for gravel trucks at this intersection was from 8 a.m. to 9 a.m. This intersection's overall p.m. peak hour was from 5 p.m. to 6 p.m., while the peak hour for gravel trucks was from 3 p.m. to 4 p.m. These traffic counts generally show that gravel trucks peak in the morning and mid-afternoon hours and decrease greatly in the late afternoon.

A 24-hour count of vehicles entering and exiting Patterson Sand and Gravel from Camp Far West Road was also completed on June 28, 2001. The count classified cars, light trucks, and heavy trucks. It also classified trucks by number of axles. The results of this count were compared to the peak-hour counts at the SR 65/Riosa Road intersection to check for consistency. The numbers of gravel trucks entering and exiting the plant during the peak hours generally matched the numbers of vehicles classified as gravel trucks entering and exiting Riosa Road from SR 65. Exhibit 7-6 shows the daily distribution of trucks leaving the site on the day of the 24 hour count. Exhibit 7-7 shows average daily distributions of trucks leaving the site during 1998, when hourly truckload data were available for all days.

Peak-hour counts were also conducted at the Riosa Road/11th Street and Riosa Road/Karchner Road intersections in Sheridan. These counts were conducted in June 2002 and were not classified. The volumes at these intersections are very low and vehicle classification was estimated from the previous counts at the project site and at the SR 65/Riosa Road intersection.

Exhibit 7-6

Exhibit 7-7

The Placer County Travel Demand Model was used to estimate the growth in nonproject traffic through the year 2020. Several assumptions were needed for the 2020 No Project conditions. The proposed Lincoln Bypass realignment of SR 65 (from north of Sheridan to south of Lincoln) was assumed to be in place (see Chapter 16, Cumulative Impact Analysis). It has been assumed that “through” trucks using SR 65 from north of Sheridan to south of Lincoln would use the bypass in the future, while trucks to and from Patterson Sand and Gravel would continue to use the old SR 65 roadway through Lincoln. This assumption was developed in coordination with Placer County Department of Public Works (DPW) and represents the worst-case approach to analyzing future conditions with the new bypass built.

Traffic volumes on the old SR 65 were projected to decline in the travel model compared to existing volumes, based on a large shift of vehicles from the old SR 65 to the new Lincoln Bypass. Traffic growth on other area roadways is based on growth in the traffic model, as well as general assumptions of future growth based on recent growth trends in the area. For Riosa Road, and other local roadways in the project vicinity, a growth rate of 1.5 percent per year was assumed.

PROJECT TRIP GENERATION

The baseline scenarios (i.e., referred to as No Project in the traffic analysis) assume a trip generation rate consistent with the site’s highest production season of the year 2000 output of approximately 1.5 million tons of material. The year 2000 production rate is used for the baseline because it provides the best data available representing operational conditions at the time the Notice of Preparation was circulated and is the year closest to the mine’s historically highest rate where comprehensive traffic and operational data are available. The Plus Project scenarios assume that overall production has been reduced to 1.25 mty of material under AAPR conditions and that similar to the currently permitted operation, the MAPR would be approximately 1.82 mty. The proposed project would include production of an estimated 300,000 tons of asphaltic concrete while the No Project Alternative involves no asphaltic concrete production. The differences between the traffic generated by the proposed project and that generated by the No Project Alternative are as follows:

- ▶ With a reduced average annual output of 1.25 million tons, the site would generate fewer truck trips than it currently does. The site currently generates approximately 67,000 annual truck trips. With the proposed reduction in annual output, the site would generate approximately 53,000 annual truck trips. During the peak months of June–October, this represents a daily average of 218 truck trips versus the current average of 273. Exhibit 7-8 is a graph of the daily truckloads, ranked from highest to lowest, under the proposed project for both the AAPR and the MAPR scenarios. As shown in Exhibit 7-8, the average daily volume of truck trips during the peak production months (June–October) would be 218 for the AAPR scenario and 317 under the MAPR scenario.

The proposed project would generate an additional 750 truckloads (1,500 one-way truck trips) per year under the AAPR scenario. All of these additional truck trips would be generated by delivery trucks bringing liquid asphalt to the proposed asphalt batch plant. Because the asphaltic concrete would consist largely of

Exhibit 7-8

aggregate material mined at the project site, asphaltic concrete delivery trips would replace aggregate delivery trips, and therefore would not be additive to aggregate delivery trips. The average number of additional truckloads would be about two per day (or about four one-way truck trips). Based on the daily capacity of the asphalt batch plant, the highest number of additional truckloads generated in a day would be about 15 (or about 30 one-way truck trips) under the AAPR scenario.

- ▶ Approximately 44 people are currently employed at the existing operations. The proposed project would create three additional jobs associated with the asphalt batch plant. The current operation generates an estimated 88 daily commute trips. The proposed project would add an additional six commute trips for a total of 94 per day.
- ▶ In addition to commute trips and haul truck trips, the existing operation is estimated to generate about 2.5 daily automobile and light truck trips per employee for deliveries, services, lunch trips, etc. This represents approximately 110 daily trips under No Project conditions and approximately 118 trips with the proposed project. The proposed project would generate an additional eight daily trips for such purposes.

Exhibit 7-9 shows the distribution of trips from the project site. This distribution was estimated based on the number of trucks leaving the site and on gravel truck turning movements at the two major study intersections (SR 65/Riosa Road and SR 65/SR 193). Table 7-1 shows the estimated number of yearly heavy-truck trips generated under the proposed project and the No Project Alternative. Also shown in this table is the estimated number of yearly heavy-truck trips under the MAPR scenario. Table 7-2 shows the estimated daily and commute hour truck traffic generated under these conditions. Table 7-3 shows the estimated daily and commute hour automobile and light-truck trips generated under these three conditions. Exhibit 7-10 shows the additional traffic that would be generated by the proposed project on an “average” day during the peak production months.

Table 7-1 Yearly Heavy Truck Trips			
Scenario	Heavy Truck Trips ¹		
	1.25 Million Tons Hauled per Year ²	1.5 Million Tons Hauled per Year ³	1.82 Million Tons Hauled per Year ⁴
No Project	—	134,000	—
Proposed Project: Average Annual Production Rate	107,500 ⁵	—	—
Proposed Project: Maximum Annual Production Rate	—	—	155,800 ⁵
¹ One-way (either inbound or outbound) trips with approximately 23 tons per haul truck. ² The proposed project would process a maximum of 1.25 million tons per year. ³ Based on 2000 truck volume data. ⁴ Maximum annual production rate is 1.82 million tons per year. ⁵ Includes additional trucks for liquid asphalt delivery.			
Source: DKS Associates 2001			

Exhibit 7-9

Table 7-2 Daily and Peak-Hour Heavy-Truck Trips				
Scenario	Rank	Heavy Truck Trips ¹		
		Daily	AM Peak Hour 6–7 am ²	PM Peak Hour 5–6 pm ²
No Project ³	Average Day	546	71	10
	30 th Highest Day	830	108	15
	Highest Day	1,126	146	21
Proposed Project: ⁴ Average Annual Production Rate	Average Day	436	57	8
	30 th Highest Day	674	88	12
	Highest Day	920	120	17
Proposed Project: Maximum Annual Production Rate ⁵	Highest Day	1,340	174	25
¹ One-way (either inbound or outbound) trips by 25-ton haul trucks. ² The peak hours represent the highest hours for total traffic volume at the SR 65/Riosa Road intersection. Truck traffic volume can be higher during other hours of the day. ³ Based on 1.5 million tons of output. ⁴ Based on 1.25 million tons of output plus proposed asphalt batch plant operations. ⁵ Based on 1.82 million tons of output plus proposed asphalt batch plant operations. Source: DKS Associates 2003				

Table 7-3 Automobile/Light-Truck Trips		
Scenario	Employees	Other Daily Trips ¹
No Project	44	110
Proposed Project: Average Annual Production Rate	47	118
Proposed Project: Maximum Annual Production Rate	47	118
¹ Based on 2.5 trips/employee to reflect trips other than commute trips Source: DKS Associates 2001		

PROJECT IMPACTS



Potential Decline in Levels of Service in Sheridan. Traffic volumes occurring as a result of existing-plus-project conditions under either the AAPR or the MAPR scenario would not worsen the overall intersection LOS at intersections in Sheridan. This impact is considered *less than significant*.

Exhibit 7-11 shows the a.m. and p.m. peak-hour turning movement volumes at the study area intersections for existing-plus-project conditions on an average day during the peak production months. An LOS analysis was conducted for the SR 65/Riosa Road intersection for existing conditions with and

Exhibit 7-10

without the proposed project. This analysis is summarized in Table 7-4. This intersection operates at overall LOS A-C under both existing-No-Project and existing-plus-project conditions. The LOS analysis shows that the relatively low number of vehicles using the minor approaches would experience a high level of delay. In all cases, the minor approach delay would be lower with the proposed project than without it. A preliminary signal warrant analysis was also conducted using peak-period traffic count data. That analysis indicates that this intersection appears to meet signal warrants under current conditions. A preliminary analysis has indicated that the intersection currently meets the peak-hour volume warrant for a traffic signal. Discussions with Caltrans personnel indicate that they do not have any current plans to signalize the intersection (Brake, pers. comm., 1998). The Union Pacific railroad tracks cross SR 65 approximately 120–150 feet north of Riosa Road, adding a level of complexity to a signal at this location that has both cost and safety implications. Once the Lincoln Bypass project is complete, the volume of traffic on SR 65 at this intersection is projected to decrease and Caltrans will relinquish the intersection to Placer County for maintenance responsibilities. Therefore, based on these factors, it is unlikely that the SR 65/Riosa Road intersection will be signalized, and it is assumed to remain stop-sign controlled in the scenarios.

Table 7-4 LOS at SR 65 / Riosa Road Intersection								
	AM Peak Hour				PM Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate								
Average Day	A	4.3	E	37.2	A	2.5	D	33.3
30 th Highest Day	A	7.3	E	56.9	A	2.7	E	35.5
Highest Day	A	13.1	F	91.1	A	2.9	F	37.3
Existing-Plus-Project Conditions: Average Annual Production Rate								
Average Day	A	3.5	D	32.5	A	2.6	D	33.6
30 th Highest Day	A	5.4	E	44.8	A	2.7	E	35.4
Highest Day	A	8.9	F	66.7	A	3.0	E	37.7
Existing-Plus-Project Conditions: Maximum Annual Production Rate								
Highest Day	C	20.5	F	133.9	A	3.3	E	41.0
Source: DKS Associates 2003								

An LOS analysis was also conducted for two other intersections in Sheridan for existing conditions. Table 7-5 and Table 7-6 show the LOS at the Riosa Road/11th Street and Riosa Road/Karchner Road intersections, respectively, under existing conditions. Both intersections experience low volumes and operate at LOS A or LOS B under existing conditions and existing-plus-project conditions under both the AAPR and the MAPR scenarios.

Exhibit 7-11

Table 7-5 LOS at Riosa Road / 11th Street				
	AM Peak Hour Overall Intersection		PM Peak Hour Overall Intersection	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate				
Average Day	A	8.4	A	7.6
30 th Highest Day	A	8.9	A	7.7
Highest Day	A	9.4	A	7.8
Existing Plus Project Conditions: Average Annual Production Rate				
Average Day	A	8.2	A	7.6
30 th Highest Day	A	8.6	A	7.7
Highest Day	A	9.0	A	7.7
Existing Plus Project Conditions: Maximum Annual Production Rate				
Highest Day	A	9.7	A	7.8
Source: DKS Associates 2003				

Table 7-6 LOS at SR 65 / Karchner Road Intersection								
	AM Peak Hour				PM Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate								
Average Day	A	5.4	A	9.7	A	3.8	A	8.9
30 th Highest Day	A	6.2	A	9.9	A	4.1	A	9.3
Highest Day	A	6.8	B	10.1	A	4.3	A	9.1
Existing-Plus-Project Conditions: Average Annual Production Rate								
Average Day	A	5.1	A	9.6	A	3.8	A	8.8
30 th Highest Day	A	5.8	A	9.8	A	4.0	A	8.9
Highest Day	A	6.4	A	10.0	A	4.2	A	9.0
Existing-Plus-Project Conditions: Maximum Annual Production Rate								
Highest Day	A	7.1	B	10.3	A	4.5	A	9.1
Source: DKS Associates 2003								

The overall LOS at intersections in Sheridan would not decline under either the AAPR or the MAPR scenario as a result of existing-plus-project traffic volumes. Therefore, this impact is considered less than significant.

Impact
7-2

Potential Decline in Levels of Service in Lincoln. Traffic volumes occurring as a result of existing-plus-project conditions would not worsen the LOS at the SR 65/SR 193 intersection in Lincoln to LOS E or worse. This impact is considered *less than significant*.

The SR 65/SR 193 intersection in Lincoln has been analyzed and the results are displayed in Table 7-7. Under all existing cases, this signalized intersection operates at LOS D or better. The amount of project related truck traffic passing through Lincoln on SR 65 would decrease with the proposed project under the AAPR scenario. Similar to the currently permitted operation, the MAPR for the proposed project would be about 1.82 mty. Therefore, the proposed project under the MAPR scenario would generate a slightly higher volume of truck trips than the No Project Alternative because of the addition of the liquid asphalt delivery trucks. This impact is considered less than significant.

Table 7-7 LOS at SR 65 / SR 193 Intersection				
	AM Peak Hour Overall Intersection		PM Peak Hour Overall Intersection	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate				
Average Day	C	21.3	C	31.2
30 th Highest Day	C	21.9	C	31.8
Highest Day	C	22.5	C	32.0
Existing Plus Project: Average Annual Production Rate				
Average Day	C	21.2	C	31.2
30 th Highest Day	C	21.7	C	32.8
Highest Day	C	22.0	C	34.1
Existing Plus Project: Maximum Annual Production Rate				
Highest Day	C	23.0	C	32.1
Source: DKS Associates 2003				

Impact
7-3

Potential Decline in Levels of Service in Sheridan (2020 Conditions). Traffic volumes occurring as a result of 2020-plus-project conditions under either the AAPR or the MAPR scenario would not worsen the overall intersection LOS at intersections in Sheridan. In addition, traffic volumes occurring as a result of the 2020-plus-MAPR condition would not worsen the overall intersection LOS at intersections in Sheridan. This impact is considered *less than significant*.

Exhibit 7-12 shows the additional daily traffic that would be generated by the proposed project in 2020 on an average day during the peak production months. Exhibit 7-13 and Exhibit 7-14 show the a.m. and p.m. peak-hour turning movement volumes at the study area intersections for 2020 No Project and 2020 plus-project conditions, respectively, for an average day during the peak production months.

Exhibit 7-12

Exhibit 7-13

Exhibit 7-14

An LOS analysis was conducted for the SR 65/Riosa Road intersection for 2020 conditions with and without the proposed project. This analysis is summarized in Table 7-8. A preliminary signal warrant analysis was also conducted using peak-period traffic count data. That analysis indicates that this intersection would likely meet one or more signal warrants under 2020 conditions.

Table 7-8 LOS at SR 65 / Riosa Road Intersection–2020 Conditions								
	AM Peak Hour				PM Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project Conditions: Existing Average Annual Production Rate								
Average Day	A	6.7	D	28.5	A	4.7	E	35.4
30 th Highest Day	A	9.9	E	40.5	A	5.0	E	37.4
Highest Day	C	15.8	F	61.9	A	5.2	E	39.8
2020-Plus-Project Conditions: Average Annual Production Rate								
Average Day	A	5.9	D	25.6	A	4.8	E	35.8
30 th Highest Day	A	7.9	D	33.1	A	5.0	E	37.7
Highest Day	B	11.5	E	46.5	A	5.3	F	40.3
2020-Plus-Project Conditions: Maximum Annual Production Rate								
Highest Day	C	22.6	F	86.3	A	5.8	E	44.4
Source: DKS Associates 2003								

A preliminary analysis has indicated that the intersection currently meets the peak-hour volume warrant for a traffic signal. Discussions with Caltrans personnel indicate that they do not have any current plans to signalize the intersection (Brake, pers. comm., 1998). The Union Pacific railroad tracks cross SR 65 approximately 120–150 feet north of Riosa Road, adding a level of complexity to a signal at this location that has both cost and safety implications. Once the Lincoln Bypass project is complete, the volume of traffic on SR 65 at this intersection is projected to decrease and Caltrans will relinquish the intersection to Placer County for maintenance responsibilities. Therefore, based on these factors, it is unlikely that the SR 65/Riosa Road intersection will be signalized, and it is assumed to remain stop-sign controlled in the scenarios.

Table 7-8 shows that the overall intersection LOS is A-C under all circumstances. The worst movement (westbound vehicles) delay and LOS are also displayed in Table 7-8. The SR 65/Riosa Road intersection would have improved LOS in all cases under 2020-plus-AAPR cases. Under the 2020-plus-MAPR conditions, the overall intersection LOS would remain at C or better.

An LOS analysis was also conducted for two other intersections in Sheridan for 2020 conditions. Table 7-9 and Table 7-10 show the LOS at the Riosa Road/11th Street and Riosa Road/Karchner Road intersections, respectively, under all 2020 conditions. Both intersections experience low volumes and

operate at LOS A or LOS B under 2020 conditions, and 2020-plus-project conditions under the AAPR and the MAPR scenarios. This impact is considered less than significant.

Table 7-9				
LOS at Riosa Road / 11th Street–2020 Conditions				
	AM Peak Hour Overall Intersection		PM Peak Hour Overall Intersection	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project Conditions: Existing Average Annual Production Rate				
Average Day	A	8.9	A	8.0
30 th Highest Day	A	9.4	A	8.0
Highest Day	A	10.0	A	8.1
2020-Plus-Project Conditions: Average Annual Production Rate				
Average Day	A	8.7	A	7.9
30 th Highest Day	A	9.1	A	7.9
Highest Day	A	9.6	A	8.1
2020-Plus-Project Conditions: Maximum Annual Production Rate				
Highest Day	B	10.4	A	8.1
Source: DKS Associates 2003				

Table 7-10								
LOS at Riosa Road / Karchner Road Intersection–2020 Conditions								
	AM Peak Hour				PM Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project Conditions: Existing Average Annual Production Rate								
Average Day	A	4.5	A	10.0	A	3.8	A	9.1
30 th Highest Day	A	5.2	B	10.2	A	4.0	A	9.1
Highest Day	A	5.7	B	10.5	A	4.1	A	9.2
2020-Plus-Project Conditions: Average Annual Production Rate								
Average Day	A	4.3	A	9.9	A	3.8	A	9.0
30 th Highest Day	A	4.9	B	10.1	A	3.9	A	9.1
Highest Day	A	5.4	B	10.3	A	4.1	A	9.1
2020-Plus-Project Conditions: Maximum Annual Production Rate								
Highest Day	A	6.1	B	10.7	A	4.3	A	9.2
Source: DKS Associates 2001								

Impact
7-4

Potential Decline in Levels of Service in Lincoln (2020 Conditions). Traffic volumes generated by the proposed project under 2020 conditions would not worsen the LOS at the SR 65/SR 193 intersection in Lincoln. This impact is considered **less than significant**.

The SR 65/SR 193 intersection in Lincoln has been analyzed and the results are displayed in Table 7-11. Under all 2020 cases, this signalized intersection operates at LOS C or better. Project related traffic would pass through Lincoln on SR 65. In the 2020 case, traffic from the project site could be diverted away from Lincoln, if safe and efficient access is provided to the proposed Lincoln Bypass in the Sheridan area. Sufficient information is not yet available to determine this diversion potential. Placer County would have to work with the applicant and Caltrans to assure safe and efficient access from Patterson Sand and Gravel to the proposed Lincoln Bypass. This impact is considered less than significant.

Table 7-11 LOS at SR 65 / SR 193 Intersection–2020 Conditions				
	AM Peak Hour Overall Intersection		PM Peak Hour Overall Intersection	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project: Existing Average Annual Production Rate				
Average Day	B	15.7	C	27.9
30 th Highest Day	B	15.7	C	28.0
Highest Day	B	15.8	C	28.1
2020-Plus-Project (No New Haul Road): Average Annual Production Rate				
Average Day	B	15.6	C	27.9
30 th Highest Day	B	15.8	C	28.0
Highest Day	B	15.8	C	28.1
2020-Plus-Project (No New Haul Road): Maximum Annual Production Rate				
Highest Day	B	16.0	C	28.2
Source: DKS Associates 2003				

Impact
7-5

Roadway Deterioration. Trucks and other vehicles traveling to and from the project site would travel on County roads for about 30 more years than currently permitted by the existing CUP. Because the project would require pavement reconstruction on segments of Placer County's roadway system during the life of the new CUP, the project would result in a **significant** impact related to roadway deterioration.

The volume of project generated truck and light duty vehicle traffic traveling on Placer County roads would decrease on an average annual basis under the AAPR scenario. The proposed mine expansion project, however, would extend the duration of mining activities by approximately 30 years. As a result, trucks and other vehicles traveling to and from the project site would travel on County roads for about 30 more years than currently permitted by the existing CUP. Because the project would require

pavement reconstruction on segments of Placer County's roadway system during the life of the new CUP, the project would result in a significant impact related to roadway deterioration.

7.4 MITIGATION MEASURES

No mitigation measures are necessary for the following *less-than-significant* impacts.

- 7-1: Potential Decline in Levels of Service in Sheridan
- 7-2: Potential Decline in Levels of Service in Sheridan (2020 Conditions)
- 7-3: Potential Decline in Levels of Service in Lincoln
- 7-4: Potential Decline in Levels of Service in Lincoln (2020 Conditions)

A mitigation measure is provided below for the *significant* traffic impact of the proposed project.

Mitigation Measure R7-5: Contribute Fair Share Funding of Roadway Maintenance. The applicant shall contribute a fair share of funding for roadway pavement reconstruction along the Placer County-approved truck route between SR 65 and the project site during the life of the project extended by the new conditional use permit. An analysis will be conducted by Placer County DPW to estimate the life of the pavement along each segment of the truck route serving the project site based on the estimated truck volumes. Based on this analysis, an estimate shall be made of the cost to provide adequate pavement conditions for the life of the project's permit. Placer County DPW will identify a financing mechanism to ensure that adequate funding is available from the applicant when necessary pavement reconstruction is performed.

7.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measure, all significant impacts related to traffic would be reduced to a less-than-significant level.